AMENDMENTS TO THE SPECIFICATION

Please amend the specification as shown:

Please delete the paragraph on page 8, lines 9-21 and replace it with the following paragraph:

On the other hand, the present invention also provides a primer pair for PCR amplification of cDNA comprising the nucleotide sequence of SEQ. ID. No.2, consisting of paired primers of:

a nucleotide sequence :

5'-TTGGATCCATGACATCCAGATTTGGGAAAACATACAGTAGG-3' **(SEQ ID NO: 3)**;

and

a nucleotide sequence :

5'-TTGAATTCCTAGCAATGTTCCAAATATTCAATCACTCTAGA-3' **(SEQ ID NO: 4)**, and also the present invention provides a primer pair for PCR amplifying a partial chain in cDNA comprising the nucleotide sequence of SEQ. ID. No.2, consisting of paired primers of:

5'-GAATTCATAGGCACAGCGCTGAACTGTGTG-3' **(SEQ ID NO: 5)**; and

5'-TTGAATTCCTAGCAATGTTCCAAATATTCA-3' **(SEQ ID NO: 6)**.

Please delete the paragraph on page 8, line 22 to page 9, line 8 and replace it with the following paragraph:

Otherwise, as for an invention of a double strand of an short-chain interfering RNA, the present invention provides a double strand of an short-chain interfering RNA capable of inhibiting expression of mRNA comprising the nucleotide sequence of SEQ. ID. No.2 in a cervical cancer cell, wherein the double strand of the siRNA has a nucleotide sequence: CGGACTACCCTTAGCACAA **(SEQ ID NO: 7)**. In addition, it may be also applied to a pharmaceutical composition for inhibiting expression of mRNA comprising the nucleotide

sequence of SEQ. ID. No.2 in a cervical cancer cell to arrest growth of the carcinoma cell, comprising said double strand of short-chain interfering RNA of the present invention.

Please delete the paragraph on page 15, lines 18-25 and replace it with the following paragraph:

We have also confirmed that expression of the hWAPL protein as a hWAPL gene product is inhibited by using a double strand of short-chain interfering RNA (siRNA). Specifically, a double strand of short-chain interfering RNA (siRNA) exhibiting such expression inhibition activity may include, for example, that having a nucleotide sequence: CGGACTACCCTTAGCACAA **(SEQ ID NO: 7)**. In such a case, further growth of the carcinoma cell is also inhibited, so that development of the cancer can be arrested.

Please delete the paragraph on page 80, line 23, to page 81, line 19 and replace it with the following paragraph:

PCR was conducted using a commercially available cDNA library, a human testicular cDNA kit (Marathon-Ready™ cDNA Kit; Clontech Inc.) as a template and using two primers:

primer 1

(sequence: TTGGATCCATGACATCCAGATTTGGGAAAACATACAGTAGG)**(SEQ ID NO: 8)**; and

primer 2

(sequence: TTGAATTCCTAGCAATGTTCCAAATATTCAATCACTCTAGA) **(SEQ ID NO: 9)**. In the PCR reaction, Advantage 2 polymerase mix (Clontech Inc.) kit was used and according to the instructions in the kit, amplification was conducted with a temperature cycle:

(1) 94 °C for 1 min;

(2) 5 cycles of 94 °C for 10 sec and 72 °C for 2 min; and

(3) 25 cycles of 96 °C for 10 sec and 70 °C for 2 min,

and then followed by elongation reaction being carried out at 72 °C for 5 min. After the reaction, the product of PCR amplification thus obtained was cloned to a plasmid vector pGEM-T easy (PROMEGA) in accordance with the instructions for pGEM-T easy (PROMEGA). It was transduced to E. coli DH5 α (Invitrogen) and using an ampicillin resistance gene in the plasmid vector pGEM-T easy, clones carrying the plasmid were selected in an LB agar medium containing ampicillin.

Please delete the paragraph on page 82, lines 11-25 and replace it with the following paragraph:

In the Northern blotting, an mRNA expressed from the hWAPL gene was identified from total RNAs prepared, using a DNA having a nucleotide sequence complementary to the portion of nucleic acid Nos. 2511 to 2813 in the full-length sequence of the hWAPL of SEQ. ID. No.2, as a detection probe. On the other hand, in the real-time PCR, a cDNA of the hWAPL was amplified, using an amplification kit SYBR Green I (TaKaRa Co. Ltd.) and as PCR primers, a pair of primers:

5'-GAATTCATAGGCACAGCGCTGAACTGTGTG-3' **(SEQ ID NO: 5)** and

5'-TTGAATTCCTAGCAATGTTCCAAATATTCA-3' **(SEQ ID NO: 6)**.

Furthermore, human β-actin was used as an intrinsic standard. PCR primers used for amplification of cDNA of human β-actin were a commercially available pair of primers (Clontech) of:

5'-GGGAAATCGTGCGTGACATTAAG-3' **(SEQ ID NO: 10)** and

5'-TGTGTTGGCGTACAGGTCTTTG-3' **(SEQ ID NO: 11)**.

Please delete the paragraph on page 84, lines 6-17 and replace it with the following paragraph:

An E6 gene from HPV 16 was amplified and isolated by RCR method using a pair of primers

16E6attB1:

5'-AAAAAGCAGGCTCCACCATGTTTCAGGACCCACAGGAGCGACCC-3' **(SEQ ID NO: 12)**, and

16E6attB2:

5'-AGAAAGCTGGGTTACAGCTGGGTTTCTCTACGTG-3' **(SEQ ID NO: 13)**,

while an E7 gene from HPV 16 was amplified and isolated by RCR method using a pair of primers

16E7attB1:

5'-AAAAAGCAGGCTCCACCATGCATGGAGATACACCTACAT-3' **(SEQ ID NO: 14)** and

16E7attB2:

5'-AGAAAGCTGGGTTATGGTTTCTGAGAACAGATGGGG-3' **(SEQ ID NO: 15)**.

Please delete the paragraph on page 84, line 25, to page 85, line 18 and replace it with the following paragraph:

It has been found that an product of E2 gene derived from HPV can be bound to a promoter region in the E6 and E7 genes to possess a function for inhibition of the transcription thereof, and that a product of E2 gene derived from a bovine papilloma virus (BPV) has a similar function for inhibiting the transcription. The BPV1 E2 gene fragment was obtained by nested PCR using pBPV-MII as a template. In the nested PCR, the pair of inner primers used was consisted of:

5'-AAAAAGCAGGCTCCACCATGGAGACAGCATGCGAAC-3'**(SEQ ID NO: 16)** and

5'-AGAAAGCTGGGTCAGAAGTCCAAGCTGGCTGTAAAG-3' **(SEQ ID NO: 17)**,

while the pair of outer primers was consisted of:

5'-GGGGACAAGTTTGTACAAAAAAGCAGGCT-3' **(SEQ ID NO: 18)** and

5'-GGGGACAAGTTTGTACAAGAAAGCTGGGT-3' **(SEQ ID NO: 19)**.

The BPV1 E2 gene fragment thus obtained was cloned into a retrovirus vector pCMSVpuro, which is based on a general-purpose virus vector pCMSCV (Clontech), to prepare a retrovirus

MSCV-puro BPV1E2 for producing the E2 recombinant from BPV. The retrovirus vector pCMSVpuro comprises a puromycin resistance gene as a selection marker.

Please delete the paragraph on page 85, line 19, to page 86, line 6 and replace it with the following paragraph:

Human epidermal cells HDK1 (BioWhittaker) were infected with the retroviruses LXSN-16E6, LXSN-16E7 and LXSN-16E6E7 for producing HPV 16 derived E6 or E7 recombinants, respectively. As a negative control, a human epidermal cell HDK1 infected with a retrovirus vector pCLXSN was used. A cell line in which continued infection of the retrovirus vector was established was selected by culturing the cells on a medium containing G418 at 50 μg/mL for 3 days. After infection, expression of the hWAPL gene induced by a recombinant protein of the E6 or E7 from HPV 16 was determined by Western blotting using a specific antibody recognizing a region of partial amino acid sequence 50 to 66 (amino acid sequence: CNFKPDIQEIPKKPKVEE **(SEQ ID NO: 20)**) in the oncogenic protein hWAPL (FIG. 6).

Please delete the paragraph on page 87, lines 11-18 and replace it with the following paragraph:

A promoter of hWAPL gene was amplified and isolated by PCR method using a genomic DNA in DLD-1 cell as a template with use of a pair of primers:

primer 1

(sequence: GTGCATCCCACCCACAGTGGAAGACATGG)**(SEQ ID NO: 21)** and

primer 2

(sequence: CCGCTTCCGCCGGTGAATGGTCAGTGCTGG) **(SEQ ID NO: 22)**.

Please delete the paragraph on page 88, lines 11-18 and replace it with the following paragraph:

For generating an antibody specific to the oncogenic protein hWAPL, a peptide chain ($hWAPL_{50-66}$) having a partial amino acid sequence 50 to 66: CNFKPDIQEIPKKPKVEE **(SEQ ID NO: 20)** that is located in the N-terminal region of the oncogenic protein hWAPL was prepared as an immunogen peptide by chemical synthesis. Furthermore, by recombination was produced a fused polypeptide tagged with 6×H His comprising a partial amino acid sequence 814-1037 lying in the C-terminal region of the oncogenic protein hWAPL.

Please delete the paragraph on page 92, line 25, to page 93, line 12 and replace it with the following paragraph:

Using the Silencer siRNA construction Kit (Ambion), siRNA were produced which are targeted to the following gene sequence (hWAPL AsiRNA) and to a control (negative control), respectively:

hWAPL AsiRNA: CGGACTACCCTTAGCACAA **(SEQ ID NO: 7)**

negative control: ACTACAACTGGTCGCAACC **(SEQ ID NO: 23)**.

Practically, two synthetic oligomers were prepared for each; specifically, for the hWAPL AsiRNA,

AACGGACTACCCTTAGCACAAcctgtctc **(SEQ ID NO: 24)** and

AATTGTGCTAAGGGTAGTCCGcctgtctc **(SEQ ID NO: 25)**,

and, for the negative control,

AAACTACAACTGGTCGCAACCcctgtctc **(SEQ ID NO: 26)** and

AAGGTTGCGACCAGTTGTAGTcctgtctc **(SEQ ID NO: 27)**.

Please delete the paragraph heading on page 95, line 20 and replace it with the following heading:

cDNA sequence of the hWAPL **(SEQ ID NO: 28)**

Please delete the paragraph heading on page 100, line 4 and replace it with the following heading:

Promoter region sequence of the hWAPLgene **(SEQ ID NO: 29)**

Please delete the paragraph heading on page 104, line 2 and replace it with the following heading:

cDNA sequence of the mouse WAPL **(SEQ ID NO: 30)**